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FOUNDED BY WILLIAM HUNTING, F.R.C.V.S.

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SCHEDULED DISEASE.

Last week the Board of Agriculture completed the returns of scheduled disease for April; and we now have four months figures to review. With one notable exception, the report can fairly be called satisfactory.

No case of foot-and-mouth disease has occurred; and we cannot be too grateful for our long immunity from this disease. The last outbreak was a little over two years ago, in the first four months of 1916.

Anthrax has dropped to scarcely half last year's figures—113 outbreaks against 229. A number of different causes have probably contributed to this; and one of them may well have been the shortage of imported feeding cakes, which was alluded to in a report from Perthshire last week, and seems a point well worth following up.

Glanders shows a slight increase upon last year—14 outbreaks against 10—but this need not concern us. Very possibly the severe spring and bad food conditions may have developed a few cases which might otherwise have remained latent—an advantage in the long run, of course.

Sheep scab has declined considerably—222 outbreaks against 348 last year, and the outlook seems hopeful, though much still remains to be done against it. Swine fever has fallen much more, as there have been only 323 outbreaks against 840 and 1523 in the corresponding periods of 1917 and 1916 respectively. In these 323 outbreaks only 114 animals were slaughtered, which illustrates one of the advantages of the present policy of inoculation. The column devoted to swine fever is perhaps the most hopeful one in the whole report.

The one remaining disease forms the only unsatisfactory feature of the report. Parasitic mange is not far from double last year's figures—2230 outbreaks against 1200. Probably the whole explanation may be summed up in one term, "war conditions," and, as these or something approaching them are likely to prevail for a long time yet, the outlook upon equine mange is disquieting.

With this one exception, which, disquieting as it undoubtedly is, relates only to one of the less serious scheduled diseases, the figures are encouraging. We should like to see a better position regarding sheep scab, but there seems good hope of that before long. On the whole, the Board continues to hold scheduled disease in check in the most difficult period of its history, and that it should be succeeding so well reflects no small credit upon the staff.

At the moment of going to press a copy is to hand of a new Order, dated May 7th, "Parasitic Mange (Amendment) Order of 1918." Comment must be deferred until next week.

A NOTE ON DOURINE.

By Colonel H. T. PEASE, C.I.E., V.D., I.C.V.D.,
Principal, Punjab Veterinary College, Lahore.

[Abridged.]

(Concluded from p. 450.)

Diagnosis. As may readily be gathered from what has already been said, there is great difficulty in diagnosing some cases of chronic and latent Dourine, and owing to this fact the control and eradication of the disease has always been a troublesome business. In dealing with them it is the custom to trace the disease so far as is possible to its origin and then to keep under observation all mares and stallions which directly or indirectly have been exposed to the disease. Animals which show clinical evidence of the affection are either at once destroyed, or so dealt with that they are no longer used for stud purposes.

The ideal proof is the microscopic demonstration of *trypanosoma equiperdum*. But this is generally difficult and sometimes an impossible task; it often requires a prolonged period of isolation and observation and can only be undertaken when horses can be kept under control. This is generally possible with good horses in India.

At the same time a very great deal of experience is necessary before one can, from the sometimes slight traces visible, diagnose the disease. It was in view of this difficulty that I made a recommendation to the Board of Scientific Advice that the Imperial Bacteriologist be instructed to ascertain whether the complement fixation test devised by Mohler, Eichorn and Buck and adopted in America could be carried out successfully in India. This test is, so far, the only one known which is likely to be of use for the diagnosis of occult cases of Dourine. It has been adopted in America and it is reported that in the numerous cases which have been tested the results were almost invariably definite and only on very few occasions has it been found necessary to make retests on cases which appeared typical. The reaction obtained is well marked.

Mohler, Eichorn and Buck, in 1914, stated that since testing was undertaken by the method described, 8657 samples had been examined from the Montana, Cheyenne and Standing Rock Indian Reservations in North America. Of these 1076 gave positive reactions, which appears to be a very large proportion, but when it is remembered that the animals were kept under range conditions, without sanitary or veterinary control, and also that before the disease was recognised as Dourine, it had been diagnosed for a long period as some other affection, it will be apparent that the opportunity for spread was ideal.

If the test proves reliable in India all breeding animals which have been exposed to the infection, should be submitted to it

Mode of contagion. In an ordinary way the disease is transmitted during the act of covering. All mares which are covered by a diseased stallion are not infected: in an experiment it was found that of fifteen mares covered by the same diseased stallion only ten were infected.

Transmission is undoubtedly favoured by abrasion of

the mucous membranes of the diseased and the healthy animal. Much also depends on the presence of the trypanosomes in the œdematous parts in considerable numbers at the time of covering. The swollen œdematous penis is readily abraded. Stallions are readily infected by a diseased mare.

The stallion is naturally the more prolific means of spreading the disease.

Experimentally, subcutaneous inoculation of the blood and œdema containing the parasite, causes the disease, and in such cases the incubation varies from seven to twenty days as the parasites are numerous or few in the material used.

Course and termination. The disease in India seems to differ very little from that seen in other countries. It may run a fairly rapid course terminating fatally in a few months, but as a rule the progress of the disease is slow and chronic. It appears that country-bred horses are not quite so susceptible as imported ones and that the mortality is less in India, being 40 to 50 per cent. against 70 per cent. in Europe.

Of four stallions which died in the Veterinary College in Paris the time taken was 11 months, 20 months, 23 months, and 26 months respectively.

Viardot, who had much experience in Algeria, concluded that weakly animals died in from four to eight months, but that it varied greatly according to the constitution of the animal attacked and to the severity of the attack. In twelve stallions the average period was 91 days, but strong, well-fed young animals lived from a year to three, four, or even five years.

In Lingard's fatal cases, three mares died in 75 days, six and seven months respectively.

In India we have cases on record in stallions in which the disease is still in an active state more than three years after the first symptom. Many cases run a very long course, especially if animals are kept under good conditions and not allowed to cover.

Abortion. Fleming states that diseased mares which have conceived usually abort towards the third or fourth month of gestation. Should the full term of pregnancy be reached the foal produced is dwarfed, badly formed, and either dead at birth or dies soon after.

It is generally found in India that where the disease is prevalent abortions are of common occurrence. Healthy foals are occasionally born from mares affected with Dourine. Higgins, in Canada, reports that three mares in the last stage of Dourine have given birth to apparently healthy foals, and three other mares found to be affected with chronic Dourine had young foals at foot. He considers that abortion is a rare event, occurring only in advanced cases where there is emaciation and loss of co-ordination of muscles of the hind quarters.

Mortality. In one instance 107 mares were served by diseased stallions. Out of this number 92 were infected, 54 died, and the majority of the others had not recovered their health a year afterwards. At Tarbes, out of 750 mares put to diseased stallions 107 became diseased and 52 died. In another stud of 150 mares covered by infected horses 58 were infected and 40 died. In another instance, out of 321 mares the loss was 160, and of 14 stallions 10 became infected and five died. It will be seen that in other countries the loss is variable though always serious, seldom less than 50 per cent., often more in horses kept at work, covering mares.

[The note contains a further review of the pathological manifestations of the disease: instructions, in force in Algeria, for examination and isolation: a copy of the Act (V of 1910) in force in India, of which Col. Pease remarks, "it errs on the side of caution. An experienced man should be trusted to diagnose Dourine without demonstrating the parasites, which is often not possible." There are 10 photo-illustrations of diseased conditions.].

NORTH MIDLAND VETERINARY ASSOCIATION.

[National V.M.A.—Northern Branch.]

(Concluded from p. 453).

Mr. R. Hudson: With regard to the feeding of horses, I think a good deal might be done in raising the quality of some of the foods we do use. For instance, hay. The feeding value of hay could be raised to a considerable extent by cutting it at an earlier period, before the seeds are shed. The food value can also be increased considerably by proper tillage. Two which are available—lime and basic slag—are not really expensive, and applied to the land would undoubtedly increase the food value considerably. I think the President referred to the unsuitability of some of the foods, which are being used, which produce skin trouble and lice. That has been the case in my practice, and I think these feeding stuffs might be helped by feeding roots where available.

I think something should be done to prevent horses which can do useful work from being killed for human food.

I think I might class myself amongst those members of the profession who have never been great drug users, or at any rate, not been a user of expensive drugs. Of course we all have to use them; but there are many cases in which simpler drugs could take the place of the more expensive ones. This would save a considerable amount of money in tinctures in alcohol, which is, of course, an expensive item now. Liquid extracts will play an important part in the future, and can be used in much smaller doses than many of the tinctures at present in use.

In am troubled with quack medicines as much, or perhaps more than any town practitioner. When I first went into practice, the practice was provided with labels, and medicine was bottled, labelled, and dispensed on a scale quite equal to any quack medicine on the market, and I do not think any practice has been hit harder, for the simple reason that clients had been taught to use these medicines, and looked for a distinctive lable. Then came along the quack medicine, and where they beat us was in touting. They went round from farm to farm and touted for orders. Until we can do this we shall never beat the quack. Whether we should try or not is a doubtful question. I think the quack has come to stay, and unless we can beat him by going round from farm to farm we shall never oust him.

With regard to the publishing of "Secret Remedies," judging by the advertisements in the papers, I do not think it has done very much to aid the medical profession. I do not know what medical men's views are, but I think there is as much quackery in the medical profession as ever there was.

With regard to anæsthetics. Like Mr. Fletcher, I do honestly say that I hesitate to use a general anæsthetic of any sort. I never do so without some doubt, or some fear, that some unsatisfactory result is going to follow. Although I have used a general anæsthetic—Chloroform—pretty freely, I have only had one accident, which happened to be in the case of a very good horse. Except in that case I have never had any definite reason to be afraid of its use, but still I am afraid. I think it is no one veterinary surgeon's work to operate and give an anæsthetic at the same time. That is the difficulty we have to contend with. To get a muzzle sufficiently safe for an amateur to give the anæsthetic while you operate is a tall order, and until we do, I do not think we are justified in giving an anæsthetic and leaving anyone to look after the patient.

I have had a good many tries to find something which one could give either intravenously or hypodermically

to relieve pain, either for large operations or for small operations. So far Cannabis Indica has been the best I have tried, and I think it will be reliable when we know the exact dose to administer. It has done well for me but it does not give a total freedom from pain during the operation. I have carried out experiments to see how much should be used, and I find that a considerable quantity can be given without danger. I gave a mare first 10 c.c. of it without any effect. She went on feeding without any apparent trouble. Then I jumped from 10 c.c. to 4 drms. within about two hours, and she slept for two days. It took about three or four hours to get her well under. I do not know of any ill-effects. The injection into the jugular sometimes creates a little swelling, but I think it is due to the injection getting under the connective tissue between the neck and the jugular vein, but I have never known an abscess to form. The inflammation has always cleared away in a few days, and that is the only trouble I have had. I have used it in milk cows with considerable advantage.

As to local anæsthetics, I do not think, with the exception of the dog, we need fear the injection of cocaine in any animal. To give you an instance of what may be done—only the other day I did tenotomy standing with no other anæsthetic than a 5% solution of cocaine. I do not think the pony had any pain, for he stood and never flinched. I have done it before, in the case of a blood horse, also under cocaine. I would rather do it standing than with them cast. One has a better feel of the tendon, knows what one is doing, and knows what effect is being produced.

I thank you, Mr. President, for your very interesting address.

Mr. C. SECKER SMITH: The one part of your address, Mr. President, for which I wish particularly to thank you, which takes the most of my interest, is the feeding of horses. It is a question which has caused me a certain amount of anxiety and worry, because the last month or two I have been asked by several of my colliery clients with regard to the ponies. When the rationing scheme for horses came into force one of my collieries decided that they would, as far as possible, ration their ponies according to the scheme. This meant a big reduction on what the ponies had been getting, and the manager told me that they would give the scheme a trial for a couple of months. At the end of that time they wanted me to make a careful examination and to give an opinion as to whether they could work on the rations without detriment, or whether the rations were too little. At the end of two months I made an inspection, and I am bound to admit that where the pony had reasonable work (that is ordinary shifts—the ponies which work double shifts were not in such good condition) the condition was nothing to complain about. I may say that in this particular case, in addition to the usual run, they had added Bibby's meal. It was a colliery which before the war usually used to have a fair amount of molassine.

Another colliery firm asked me a few days ago to examine a sample of hay, and, of course, whenever I am asked for an opinion like that I am always suspicious that they are trying to pull my leg, but in this case they were perfectly honest. They said it was a sample of Government hay which had been sent to them. After I had examined it I told the manager that in my opinion it was absolutely no use trying to use that hay, for the ponies would never eat it. It had all the dirt in, and was fusty. The next question they put to me, which I have not been able to answer satisfactorily up to now, was, If we cannot get hay what are we to substitute for it? I personally cannot find a really proper substitute for hay, because as rations are at the present time, in my opinion, hay is the chief thing we have to depend upon; and if any gentleman can give me a good substitute for it I shall be very pleased to know of it.

I thank you, Mr. President, for your very interesting address.

Mr. M. ROBINSON: Prior to rationing I always recommended clients to give pit ponies 8 lb. per day. I had trouble at one pit, and when I asked the manager what amount of food had been knocked off, he said, 1 lb. per day. I then asked what the ponies were getting, and he replied, 6 lb.—one pound having been knocked off some time previously. On being put back on the original amount of food the ponies quickly recovered.

Mr. J. S. LLOYD: I think a good "stand-by" is what is called dredge corn. In the spring farmers sow oats, rye, peas, beans, and vetches—I do not know the quantities—and cut it about the first week in July, and harvest it like hay. The difficulty is that with a large number of ponies, as at a colliery, a big farm is necessary.

Mr. HUDSON remarked that if one gets a good hay, that is, a hay of good feeding value, only about half the quantity of corn is required.

Mr. S. E. SAMPSON: Mr. President,—I must say how sorry I was not to hear your address. I have just read it through, but that is not the same as hearing it. I must also say how pleased I am to see you in the posi- which you occupy to night, and I hope we shall have a very pleasant year.

One point has struck me, and that is, the feeding of cows. I am living on the outskirts of Sheffield, and seeing vast quantities of land that is going under the plough, I am at a loss to know how the cow, that is, the milking cow round our large cities, is going to be fed during the summer. I am glad that the growing of green crops is recommendrd. Mr. Lloyd's suggestion would perhaps answer in that way. I remember that when I was a lad at home we used to grow a green crop, and then use the land for turnips. The green crop was cut before the cows went out to grass, and had it carted to them to make up their supply of food. I think if this could be done it would help us with the supply of milk.

The chop question is becoming a very acute problem. When one sees bean straw chop put for horses to eat, I think, gentlemen, we are getting to the far end of things. Chop nowadays I think is one part bean straw, one part Cambridge straw, one part straw, and one part hay. I do not quite understand what Cambridge straw is. Possibly, as someone suggests, it is pressed straw.

Looking through *The Record* last Saturday, I saw the Presidential address of Mr. Brown, of Aberdeen University, and, gentlemen, those who have not heard Mr. Brown give an address have missed a treat. In his address he made a suggestion which I think is well worth consideration, not particularly for our Association, but for the county or any large district—that is. there should be some central place where a critical operation could be performed, and the patient put under the best possible conditions for recovery. One knows that one may use all one's skill at a farm, and all efforts are wasted because the animal is not under proper surroundings, and the attendants, who may try their best but who are not trained men, do not know what to do in an emergency. I think that if the suggestion could be brought to a practical conclusion it would be a great help. I think the high price of stock will be maintained, and if we can show the public that we are prepared to take on these critical operations, it would bring a certain amount of *kudos* to our profession. I think if this could be done, it ought to be on neutral ground, as long as it is under the control of someone who knows what ought to be done. If it could be done we should derive a great deal of advantage from it. We have a number of gentlemen in this Association who are keen on operating. I have a case now which I would not dream of operating on at a farm and leaving it to the

skill of the farm attendants, because I think they are not able to notice little details or to take such action as will produce the best results. If one could have the animals under observation and secure a recovery in a short time, the expense would be justified by the shortened time in which the animal is not able to work. If we do not, but go on in the old way and not launch out into new schemes, we shall perhaps eventually degenerate to the level of the old times.

REPLY.

The PRESIDENT: I thank you for the very kind way in which you have received my address, and also for the remarks you have made on it. I purposely only touched upon these subjects in order to get the opinion of the members present, and I think, to a certain extent, I have got to know a few things which I wanted to know.

When I mentioned anæsthetics, I did not exactly mean chloroform. I was wanting to know whether any members had been using intravenous and hypodermic injections. It is very difficult for a country practitioner to give a general anæsthetic. You gentlemen in towns have the opportunity of getting a brother practitioner to go along with you and assist you. I have not used Cannabis Indica, but during the last few months I have used an injection of chloral hydrate. The first case I tried it on was a two-year-old cart colt. I used it intravenously and it had no effect. I gave him another injection and he went down. He was not what one would call absolutely under control for operating freely. The next case I had I gave 2 oz. of chloral hydrate, made up to 4 oz. with water. The animal went down in a very few minutes and laid quietly. I was an hour over the operation. He went down at 10 o'clock in the morning, and was down till 4 o'clock. I think there is big scope for trying these intravenous injections, and getting to know the proper dose to give. Up to the present I do think they have been tried sufficiently to give us the proper dose. As to after effects, I have found none at all.

I principally brought the subject of horse food forward to get a few opinions. I, like my friend Mr. Smith, have had numerous questions asked with regard to food of pit ponies, and at the preeent time some of my clients are buying stuff which looks like the husks from malted barley. It looks, and smells, just like the outside coating of malt.

This last week I have been asked with regard to Molassine meal. I have not had any experience of this as a food. I was wondering if anyone could give me any idea of the best quantities to give with pit pony food. For a very long time we have not been using oats at all. We have been using split maize, rye, and bran. The pits I am speaking about are very deep and very hot: one is 720 yards, and the other 820 yards deep. They are very hot, and the tubs in use are of metal; I should think they weigh 6 cwt., and each tub will carry 12 cwt. of coal. The ponies run from 12-3 to 14 hands. These ponies pull from 3 to 8 or 9 tubs. They are working double shifts—that is, 16 hours out of the 24. We have provided corn bins and water so that they can get a little to eat whilst working. The ponies are so tired when getting to the standing that they do not take sufficient time to get their food. As far as I can see the ration is not sufficient. Our ponies have run off considerably. In fact they are getting very, very poor. Of course, with some ponies it does not seem to matter, however much they are worked they will always be fit. My people want Molassine meal to take the place of corn. I thank you, gentlemen for your comments on my address.

Mr. HUDSON said that up to 4 lb. of Molassine meal might be used as a substitute for corn.

Mr. C. SECKER SMITH: My experience of Molassine is that it acts very well to bring a pony into condition. One client, who had polo ponies, after having turned them out to get them into condition always used to give them Molassine, and found it very effective. The great objection I have is that in the majority of cases where Molassine is given, when you drop it the pony will lose a lot of condition before it begins to take food properly again.

Mr. M. ROBINSON: I am of opinion that although Molassine improves the condition of the pony, it acts like a drug, and when it is stopped the pony misses it and will not feed properly.

Mr. H. THOMPSON related some of his experience with Molassine, and its supposed effect in the eradication of worms. As to bran, he said: "I have one stud of 45 horses, to which we gave no bran at all for seven months, and they were absolutely free from colic, and there was no case of stoppage. I think this is conclusive that the use of bran is not altogether good. The animals were fed on a mixture of meadow hay, oats, and maize. They were heavy horses, getting about 16 lb. of corn per day."

Mr. T. C. FLETCHER: I remember a case in which the horsekeeper was a great believer in the Saturday night bran mash. They never had so much trouble and never lost so many horses from stoppage and bowel troubles as during his time. It often struck me that this man was producing the disease I was troubled with. During one Whitsuntide we lost three from twisted bowels and intestines. This caused us to look for the cause of all the bowel trouble. I then gave the horsekeeper instructions that he was to give the animals the usual food on Saturday nights, but to give them less of it, with a little more hay; then the bowel trouble I was constantly in attendance for ceased. I wonder if anyone has had experience of the over supply of hot bran producing anything of the same nature.

Mr. H. THOMPSON: I have had similar experience to that of Mr. Fletcher in one particular animal. On Saturday evenings I used to have to attend this horse for colic. I stopped the bran mash, and the colic immediately ceased.

Mr. Thompson also spoke of the good effects of steaming the food.

Mr. M. ROBINSON referred to a stud of horse where the owner steamed his chop. The owner was rather proud of his steamer. In this particular place they were always troubled with colic. The horses were always fed in the evening. The owner was advised that he would either have to give up the steamer or feed the horses at mid-day. The steamer was discontinued, and there were no cases of colic for two or three years.

Mr. W. MURGATROYD referred to an arrangement adopted by one of his clients for the feeding of pigs. What struck him was the great amount of yeast in the food.

SWINE FEVER SERUM INOCULATION.

Mr. LLOYD: Mr. President and Gentlemen,—I have not prepared a paper, but what I did intend to do was to read you some extracts from literature supplied by the Board of Agriculture in reference to the treatment adopted about 28 months ago by the Board as a preventive of swine fever. I would like you to look at the leaflet which is sent out by the Board to Veterinary Inspectors acting on their behalf, to be left with owners of pigs where either swine fever is reported, or where it is prevalent. What I will do now, seeing that the hour is late, is to give you some details of some cases where I have used the serum in Sheffield, and show how they compare with statement contained in this leaflet. I had intended to give you some particulars from the Annual Report of the Chief Veterinary Officer for the year 1916, but it would take too long.

I will run through the cases:—

No. 1. I may say this is the first case in which I applied the treatment. There were 15 pigs altogether—six in a garden on one side of the cartway, and nine on the other side of the cartway—belonging to the same owner. On the one premises the swine fever was prevalent and the six pigs were inoculated; and on the opposite side there was no swine fever, and the nine pigs were not inoculated. In the animal which had died there was a swine fever ulcer in the stomach

Out of six pigs injected five did well. One developed an abscess at the seat of operation, and that was killed by the owner. I satisfied myself that the abscess was due to infection at the time of inoculation. The pigs were in a very dirty state. I took the usual precautions and washed the seat of operation, but there was no guarantee that there was no infection afterwards.

No. 2. There were 55 pigs on the premises belonging to three different owners. In the first case the dead animal showed swine fever ulcers in the cæcum and in colon. There was one sow and eight pigs belonging to this man, all were affected, and they were slaughtered and compensation paid. Eleven healthy pigs were fat and sold for slaughter.

Twenty-three pigs were inoculated, and a second time in three weeks. Several of these died during the succeeding three months, leaving 13 pigs. One died later, leaving 12; and of these, nine were released, and three killed fat.

The second owner had ten pigs, and these were all slaughtered by the Board of Agriculture as diseased pigs and compensation paid. There were two other pigs on the premises belonging to the third man. One developed swine fever and was killed, and the other one became ill and subsequently died. Whether this one was infected at the time of inoculation I am not prepared to say, because there was infection on the premises all the time.

No. 3. In this case there were 91 pigs on the premises. In the deceased animal there were lesions in the colon. There were 13 pigs in the same stye.

Ninety pigs were inoculated. Two of the 13 which were left in the infected stye died, and one pig had to be killed owing to an accident. He was not affected. Eighty-seven pigs re-inoculated ten days later, and the third inoculation was done 12 days later still. All did well.

My idea of the value of inoculation in this particular case was this. The animals had plenty of attendants, and immediately the first pig died the whole place was thoroughly cleaned, lime-washed, and disinfected, and everything was done that could possibly be done to prevent infection, and the men who fed the pigs in the infected stye were not allowed to attend to the others. The reason the second and third inoculations were made was this: when making my inspection about ten days after the first inoculation I noticed the pigs were red in the skin. I reported that to the Board, and they immediately sent me a wire to go and inoculate them. I found the same condition, more or less, when paying the visit after the second inoculation, and the Board immediately said, "inoculate again."

No. 4. In this case pigs were inoculated owing to swine fever being suspected. The disease was not confirmed. The inoculated pigs did well.

No. 5. Five pigs on the premises. The dead animal showed ulcers in the cæcum. Four pigs inoculated. Two died in 10 days, and the last pig died 18 days later, all four being dead within 28 days.

No. 6. Six pigs on the premises. The one dead did not show sufficient evidence. Another one slaughtered. Four inoculated. Reinoculation ten days later. One died a month later. The other three did well and were released. On what the Board calls "contiguous premises"—premises in the same place but not in the same occupation, were 10 pigs. All were inoculated and did well. In this particular case all the pigs were under the same roof, there being only a brick wall separating them.

No. 7. Sixteen pigs. Four dead with swine fever. One also had tuberculosis. Twelve inoculated. Ten days later six porkers out of the 12 inoculated had been slaughtered for food. One of the other six died. All died of swine fever subsequently, except one, and that was killed for human consumption.

No. 8. Ten pigs on the premises, two with swine fever, 8 inoculated. A week later one died, and three died three days later. One died a few days later still. Three pigs were reinoculated, and did well

No. 9. Six pigs on the premises. The test animal had a small ulcer in the colon. Five were inoculated and did well.

No 10. Six pigs on the premises. Three died, or were killed, with swine fever. Three inoculated.

There was something peculiar about these pigs. In the case of the first pig that was killed the disease was not confirmed. Swine fever ulcers were found in the colon of one of the other two pigs. As a rule pigs with swine fever when you get to them are sufficiently bad to show symptoms of diarrhœa, but this pig was constipated. All the pigs inoculated did badly and had to be slaughtered, two of them with rickets, no swine fever being found in either of the three.

No. 11. These were contiguous premises, there being 20 pigs belonging to four owners. The pigs were inoculated, and all did well except one lot (case 13). The owner of the first affected pigs did not have his pigs inoculated, but killed all off.

No. 12. Eight pigs on the premises. The dead animal, a sow, had one large ulcer in the colon. Seven were inoculated. Seven days after inoculation one died, the next day two died, and one was dying. Two were very bad with swine fever. One had been bad and was better. The one pig died, and the other three recovered.

This is the best case of the benefit received from serum I have seen. The pigs which recovered were drunk and tumbling about the place, and looked certain to die.

No. 13. Fourteen pigs on the premises. Sow showed old standing swine fever ulcers in the stomach and cæcum. There were two stores on the premises in good condition, which were killed for food. There were 11 suckers with the sow which had to be taken away from her. They were inoculated, and all did well. They were removed from the infected place to a wooden building in a field.

The history concerning the last three cases is interesting.

The 12th case was a sow and seven pigs, where the three recovered and did well.

When I went to the first case (No. 11) where the pigs were inoculated, the sow that had the disease in the next case had only left the premises four days previously. I did not know that the sow had been on the premises so recently, and I only took it that she had been with the boar when the pigs were moved. The owner had taken her to be served by the boar, and he had left her there till two months later. When his pigs were first noticed ill the owner of the boar wanted her moved, and she was taken away. I only discovered this after making enquiries as to the movements of pigs on the premises.

No. 14. Three pigs on the premises. One died with swine fever, two were inoculated. One died four days later, and the other did well.

No. 15. Sow and ten pigs. The test animal showed indefinite lesions of swine fever. Serum given to ten. One died with swine fever ten days later. The others were reinoculated and did well.

No. 16. Twenty-nine pigs on the premises. The dead animal showed swine fever. Eight fat pigs were killed and 20 stores were inoculated. One died five weeks later showing old-standing swine fever ulcers. Nineteen were again inoculated. Another died a month later, the death being due to a foreign body. There were no swine fever lesions present. The others did well.

No. 17. Six pigs on the premises. The dead animal had ulcers in the cæcum. Five inoculated and all did well.

No. 18. Eighteen pigs on the premises. One dead and one slaughtered. No definite swine fever ulcers, but the disease was confirmed by the Board. This was a surprise to me. It was, however, certainly suspicious.

On the premises were two boars, which were not inoculated. Fourteen stores were inoculated. All did well except one, which was killed for human consumption as it was supposed to be ruptured. When the "rupture" was opened it was found to be an abscess.

I think this is my second case of infection through inoculation.

No. 19. Four pigs on the premises. Two died. There were no definite swine fever ulcers, but again the disease was confirmed. Two received serum and did well.

? Swine fever.

No. 20. Thirteen pigs on one premises and 22 on another, belonging to two owners in partnership.

(*a*) On these premises were 13 pigs. One pig was dead, showing old-standing swine fever ulcer in the stomach. The case was not confirmed.

The 12 fellow pigs were slaughtered and found to be free from definite swine fever ulcers, but had lung disease and blood spots. At that time the disease was not confirmed, because there was only one pig showing ulcers in the stomach.

(*b*) On these premises there were 22 pigs. Four pigs died. No definite swine fever lesions, but three others were ill and one of them died the same night. Two others died the next day.

Fifteen pigs were given serum. One died, and one was killed four days later, the latter showing numerous swine fever ulcers in the cæcum and the colon, and the disease was then confirmed. All the others then showed symptoms of swine fever, and were killed by the owners.

No. 21. Five pigs on the premises. One dead, with old-standing ulcers in the stomach. Confirmed by the Board. The four others received serum and all did well.

Twenty-six pigs on contiguous premises, belonging to two owners, received serum, and all did well.

No 22. Eleven pigs in infected stye; 31 in adjoining styes. Two were killed out of 11, and swine fever was confirmed.

Forty received serum. Of the nine pigs in the infected stye five died within 10 days, and the other four were killed, being affected. The pigs in the adjoining premises were slaughtered. This outbreak was on the same premises as where the disinfection was so effectively carried out before (case 3).

No. 23. Sow and nine pigs. The sow, which was killed by the owners, went a bad colour. The owner sent for me, and I found swine fever ulcers of old-standing. The nine young suckers were inoculated, and they all died within eight or nine days.

No. 24. Two pigs on the premises. One died of swine fever—old standing disease. The pigs had been on the premises for three months, and there had never been any pigs there before. The owner bought these two pigs, and three months later one died with old-standing disease. The other one was inoculated, and he died in a month. In my opinion the first pig had swine fever when he was bought.

No. 25. Three pigs on the premises. One died with old-standing fever and necrosis in patches in the cæcum. The other two pigs were inoculated and did well.

No. 26. Three pigs on the premises. Definite swine fever ulcers in the dead pig. Two were inoculated, did well and were sold fat for human food.

No. 27. Six pigs in one garden, and nine in another garden, both lots belonging to the same owner.

In the first garden one pig was dead with swine fever, and five others were inoculated. All did well.

The pigs in the other garden at that time were not inoculated. Later, four stores in this second garden were inoculated. All the others died with swine fever. The four which were inoculated did well.

No. 28. Swine fever on premises, which it took the Board ten days to confirm. Twenty-eight pigs. One died, one killed; no definite lesions excepting one old-standing ulcer in the stomach of one of the animals. Altogether 12 died or were killed as diseased in 15 days. The rest of the pigs were slaughtered and sent to the butcher.

There were 18 pigs on adjoining premises belonging to the same owner. They were inoculated, and all did well.

No. 29. The dead animal had been on the premises some months and had done badly. There was marked necrosis of the cæcum, but no definite ulcers. Swine fever confirmed. The three fellow pigs were inoculated and all did well.

No. 30. Seventeen pigs on the premises. Five were dead, leaving 12 young stores alive. Swine fever ulcers in two. Septic patchy pneumonia in all, but the disease was not confirmed.

Twelve were inoculated. Two died four days later; one with a large number of swine fever ulcers in the colon. Then swine fever was confirmed six days after the first visit, and the other 10 were killed by the owner within a week as diseased.

Leaving out pigs on contiguous premises and premises where the disease was not confirmed, a summary of the above cases shows that 342 pigs were inoculated; 209 did well, 82 died or were killed as diseased, three were infected and recovered. Two were killed as the result of abscess infection, and 46 died, or were killed, from other causes.

The injection is done in different places. If they are young pigs which can be held up you can inject in the muscles of the thigh. If they are medium-sized pigs you can push the pig against the wall, get hold of his hind leg, and hold him so that he cannot go backward or forward, and inject in the muscles of the neck behind the ear.

The big sows are best inoculated by simply feeding them, and going up behind them and pushing the needle into the muscle of the neck and inoculating them while they are feeding. I have only had trouble with one sow. One has to have a syringe with fairly strong needles.

At this point the President suggested that any discussion or further remarks on Mr. Lloyd's paper had better be postponed to the next meeting. This was agreed to, and the meeting terminated with a vote thanks to the President. Tea was provided by the Sheffield members of the Association.

J. S. Lloyd, Hon. Sec.

SUBSCRIPTIONS TO R.C.V.S.

The Secretary of the Royal College of Veterinary Surgeons begs to acknowledge the receipt of the following subscriptions for 1918 :—

H. W. Good, Scarborough	£1	1	0
E. E. Jelbart, Capt. A.V.C., M.C.	1	1	0
C. Marshall, Farnham (1916, '17, '18)	3	3	0
J. Temple, Aberdare	1	1	0
Ainsworth Wilson, Maj., Edinburgh (1916, '17, '18)	3	3	0
Previously acknowledged	721	14	0
	£731	3	0

List of Subscribers from British East Africa, 1916, '17 (Total already acknowledged) :—

Maj. R. J. Stordy, D.S.O.	£2	0	0
Maj. W. Kennedy, D.S.O.	2	0	0
Maj. R. E. Montgomery	2	0	0
Maj. H. Brassey-Edwards	2	0	0
Maj. F. J. McCall	2	0	0
Capt. W. Henderson	2	0	0
Capt. A. W. Carter	2	0	0
Capt. M. H. Reid	2	0	0
Capt. A. E. Webber	2	0	0
Capt. T. C. Bradshaw	2	0	0
Capt. G. N. A. Hall	1	0	0
	£21	0	0

ARMY VETERINARY SERVICE

Extracts from *London Gazette*,

WAR OFFICE, WHITEHALL, May 3.

REGULAR FORCES. ARMY VETERINARY CORPS.

Temp. Lt. to be temp. Capt. :—L. C. Maguire (Apl. 1).

May 4.

Temp. Lt. to be temp. Capt. :—W. T. Ferguson (Apl. 20).

May 6.

Temp. Capt. (Bt. Maj.) S. L Symonds relinquishes the actg. rank of Maj. on ceasing to comd. a Vety. Hosp. (Mar. 1).

To be actg. Majs. while comdg. Conv. Horse Depots :—Capt. J. H. Lockwood (T.F.), Capt. T. A. B. Cocksedge (T.F.), Temp. Capt. H. G. Simpson, F.R.C.V.S., Temp. Capt. J. B. A. Hare (Feb. 26).

May 7.

Temp. Lieuts. to be temp. Capts. :—R. C. Glover, E. S. Pindar (Apl. 23).

To be temp. Lieut. :—B. Gorton (Apl. 22).

May 8.

Capt. F. W. Pawlett (T.F.), to be temp. Maj. whilst holding appt. of Dep. Asst. Dir. of Vety. Servs. (Feb. 2).

Temp. Capt. A. S. Black is dismissed the Service by sentence of a General Court-martial (March 2).

May 9.

Temp. Capt. W. Walker relinquishes his commn. on acct. of ill-health (May 10).

To be temp. Lt. :—F. W. Thompson (Apl. 22).

SPECIAL RESERVE OF OFFICERS.

May 7.

Lt. (on prob.) J. D. Haywood is confirmed in his rank.

May 9.

Lt. (on prob.) H. C. Driver is confirmed in his rank.

TERRITORIAL FORCE, ARMY VETERINARY CORPS.

May 6.

Capt. G. W. Balfour relinquishes his commn. on acct. of ill-health, and is granted the hon. rank of Capt. (May 4).

In the House of Commons, Mr. PARKER, Lord of the Treasury, replying to a question, said :—Application of the Cattle Feeding-stuffs Priority Supply Order had been extended to breeding sows and store pigs, the ration being 4 lb. per day to the former and 1½ lb. per day to the latter class of pig. The whole question of the rationing of animals was now engaging the attention of the Joint Orders Committee of the Board of Agriculture and the Ministry of Food, and it was hoped to secure a small supply of dry food for fattening purposes.

OBITUARY.

F. W. BARLING, M.R.C.V.S., Bartestree Court, Hereford. Graduated, Lond : April, 1863.

Mr. Barling died 14th April, 1918.

WILLIAM HENRY HUGHES, M.R.C.V.S., Swansea.

Date of death 20th March, 1918, and not as previously stated. Aged 71.

H. MCCOLL JOHNSTON, Newton Mearns, Glasgow, Capt. A.V.C. (S.R.), died of wounds, 4th April, 1918.

T. R. PRIME, M.R.C.V.S., Westow Hill, Up. Norwood. Graduated, Lond : April, 1876.

Death occurred 6th May, 1918, aged 71.

HENRY BIDLAKE, M.R.C.V.S. Lond : May, 1892,

Deceased 6th May, 1918.

H. HAYWOOD JEFFRIES, M.R.C.V.S., Guildford. Lond : Dec., 1899.

Mr. Jeffries was killed in an accident to motor car, April 25th.

The late Mr. John Hammond—an appreciation.

Mr. John Hammond, M.R.C.V.S., was well known throughout North-west Norfolk, where he had carried on an extensive practice, which he relinquished to his son on attaining the age of 70.

He was a man of unique personality—a champion of all that was right, with great determination and will power, and when convinced of the righteousness of a cause, he would fight for it to the bitter end ; for there was no "turning back" with John Hammond. Yet withal he had a very tender and sympathetic heart, and was always ready to assist those in poverty or distress.

Overhanging the mantelpiece of his office was the text, "Whatsoever thy hand findeth to do, do it with all thy might." This may be accepted as the motto of his life, for in every detail of his various callings he was intensely thorough.

He was the oldest County Council Inspector in Norfolk, and during the cattle plague epidemic in the early sixties, he took an active part in stamping out the disease. It is stated that he was the first veterinary surgeon in England to detect the existence of rinderpest in sheep. The late Prof. Simonds doubted the accuracy of his diagnosis until a special visit to Norfolk convinced him of the correctness of the report. Then followed a

lengthy paper from the Professor, which contained no allusion to the work of John Hammond.

In 1890 he came into conflict with the Veterinary Officers of the Board of Agriculture respecting the origin of an outbreak of bovine pleuro-pneumonia at Lord Leicester's. Every detail in connection with this case was brought before the members of the Eastern Counties V.M.A., and a resolution was unanimously passed that the theory advanced by the Veterinary Officers of the Board was unsupported by the facts and history of the outbreak. But this did not go far enough for John Hammond. A further report was published in the local press and in almost every Agricultural paper in England.

In addition to his veterinary practice he farmed extensively, and established one of the most noted herds of Red Polls in the country; the foundation stock was a cow named "Davy," presented to him by his father about 1850, and it is no exaggeration to say that the best Red Poll herds of the present day are infused with the "Davy" or "Davy-son" blood. As an exhibitor he was very successful at Smithfield, The Royal, and County Shows, and he had the honour of being presented by the then Duke of York with two oil-paintings of bullocks that had been purchased by the Duke for his herd, and had won prizes at the London Fat Stock Show.

In early life he distinguished himself as an athlete. He excelled in most of the games of the day, and had jumped 5 ft. 9 in. high. He was also a first rate shot. He had held various public offices; and for 55 years in succession was elected Churchwarden at Bale. He had most pronounced religious convictions—was a Churchman of the Evangelical type.

Of the thirteen children of his marriage, five died in infancy. His second son, John, succeeded to the practice, and his youngest daughter is married to Mr. G. H. Gibbings, of Tavistock. He was in his 89th year, and had been ailing since Christmas, but the end came with rather unexpected suddenness.

The funeral took place on April 26th, and was very largely attended. The little rural Church at Field Dalling was insufficient to accommodate the numbers who had assembled to pay a last tribute of respect to one whom they all admired and many loved.

The profession has lost an honoured member, and the name of John Hammond will still live in the memory of those who enjoyed the privilege of being called "his friends."

"He faded as a flower; but the sweet fragrance of his life will cling to his memory as the scent of the rose lingers in its withered leaves."

G. H. G.

TEMPORARY A.V.C. OFFICERS AND THE COUNCIL ELECTION.

To the Editor of "The Veterinary Record."

Sir,—"Temporary" apparently wishes to "draw" candidates for election to Council into a kind of competitive examination on his grievances, with the Army List as a text-book.

If he is sincere, why does he not privately approach some of the existing 29 or 30 members, or all of them, by which means he is likely to accomplish more towards getting his grievances seen to, than by obtaining the support of only one or two who may pass the examination.

"COUNCIL."

DISEASES OF ANIMALS ACTS 1894 TO 1914, SUMMARY OF RETURNS.

Period.		Anthrax		Foot-and-Mouth Disease.		Glanders.†		Parasitic Mange. ‡		Sheep Scab.	Swine Fever.	
		Outbreaks (a)	Animals.	Outbreaks (a)	Animals.	Outbreaks (b)	Animals.	Outbreaks (b)	Animals.	(b)	Outbreaks (a)	Slaughtered. *
GT. BRITAIN. Week ended May 4		2	2					91	151	2	49	16
Corresponding week in	1917 ...	14	15			1	1	47	85	6	69	83
	1916 ...	19	21					58	82	2	123	446
	1915 ...	18	20					30	79	1	117	543
Total for 18 weeks, 1918		115	130			14	36	2328	4474	224	372	130
Corresponding period in	1917 ...	243	278			11	20	1247	2608	354	909	377
	1916 ...	240	281	1	24	21	62	1220	2906	167	1646	5137
	1915 ...	285	317			11	16	‡223	‡526	144	1392	6089

‡ The Parasitic Mange Order of 1911 was suspended from 6th August, 1914, to 19th March, 1915, inclusive

(a) Confirmed. (b) Reported by Local Authorities. * Counties affected, animals attacked :—

Board of Agriculture and Fisheries, May 7, 1918 Excluding outbreaks in army horses.

IRELAND. Week ended May 4		...	...	...	...	...	...	Outbreaks ...	3	...	...	
Corresponding Week in	1917 ...	...	...	...	...	...	...	1	10	5	51	
	1916 ...	...	...	...	...	...	...	...	1	7	13	
	1915 ...	...	...	...	...	...	...	1	5	7	59	
Total for 18 weeks, 1918 ...		1	1	...	...	...	...	57	154	7	27	
Corresponding period in	1917 ...	2	2	...	...	1	1	17	203	113	793	
	1916 ...	1	5	...	...	...	...	28	201	107	543	
	1915 ...	1	1	...	...	1	3	17	218	102	626	

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, May 6, 1918.

NOTE.—The figures for the Current Year are approximate only. * As Diseased or Exposed to Infection